

# *Installation Guide*

## **HP Colorado 5GB and 8GB Internal Tape Drives**

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# Chapter 1: Getting Started

This *Installation Guide* shows you how to:

- Run the Install Assistant
- Install the tape drive in your computer
- Install the software
- Select and use tapes with your drive

When you finish, your tape drive will be ready to make a backup. For more information, see the online *User's Guide*.

## Viewing the Online User's Guide

The Software Installation CD contains a *User's Guide* that shows you how to:

- Use the Colorado Backup software to back up, restore, and verify data
- Recover from a hard drive crash

### Windows 95

If the Colorado Backup software has already been installed, from the **Start** menu, select **Programs, Colorado Backup, User's Guide** to view the electronic *User's Guide*.

You can also view the *User's Guide* on the CD. To do this, insert the Software Installation CD, click on **Start, Run**, type D:\SETUP (where D: is your CD-ROM's drive letter), then click on the **User's Guide** button.

### Windows 3.1

Insert the Software Installation CD, click on **File, Run**, type D:\SETUP (where D: is your CD-ROM's drive letter), then click on the **User's Guide** button. You will have the option of installing the Acrobat Reader software if you do not already have it.

## DOS

If you installed the software from the Software Installation CD, the online *User's Guide* is on your hard drive in the same directory as the software. If you installed the software from a diskette, the online *User's Guide* is on that diskette. To access the *User's Guide*, open the file DOSGUIDE.TXT with any ASCII text editor.

## Running the Install Assistant Program

The Install Assistant program evaluates your computer system and recommends the most successful way to attach your new HP Colorado tape drive.

1. Insert the diskette labeled *Run this first!* into your floppy drive.
2. **For DOS and Windows 3.1:**  
Exit to the DOS prompt, type A:\ASSIST (where A: is the floppy drive letter) and press ENTER.

### **For Windows 95 and NT 4.0:**

Click the **Start** button on the task bar, select **Run**, type A:\ASSIST (where A: is the floppy drive letter) and click on **OK**.

3. Run the Install Assistant program and select "**Recommend...**"
4. Print the Install Assistant's results to provide answers to all the questions you will encounter during this installation process:



ADDITIONAL  
IDE CARD  
REQUIRED?



JUMPER  
SETTING?



WHICH  
IDE  
CONTROLLER?



DATA CABLE  
INSTRUCTIONS?

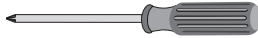


# Chapter 2: Installing the Hardware

## Installing the Internal Tape Drive

1. Locate the following items before you begin to install the tape drive:

- A medium-size Phillips screwdriver

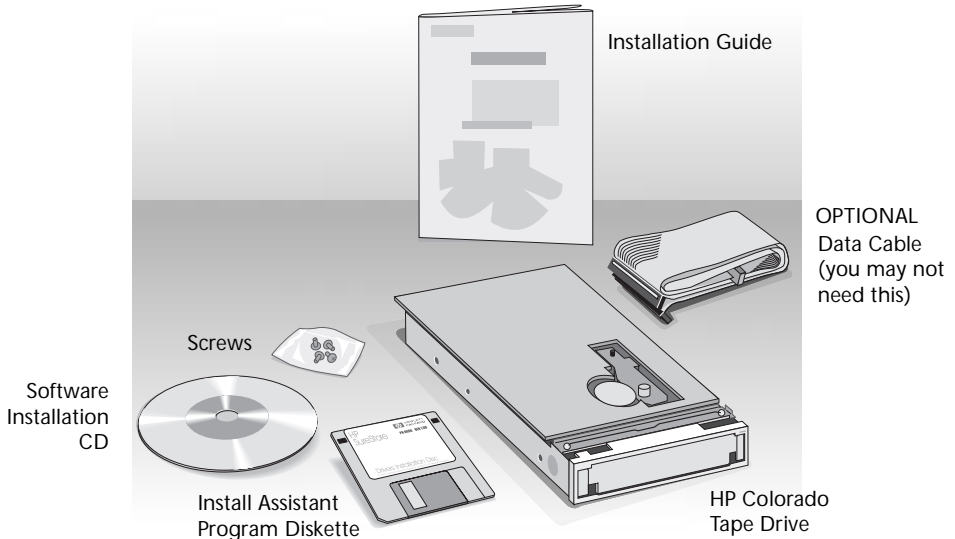


- Your computer system's manual (you may need to look up information about the location of your IDE controllers).



**CAUTION:** The discharge of static electricity can damage electronic circuitry. You can avoid static discharge by touching a grounded metal object such as your computer's case before and during installation of hardware inside your computer or by wearing a grounding strap.

2. Make sure you have the items shown below.



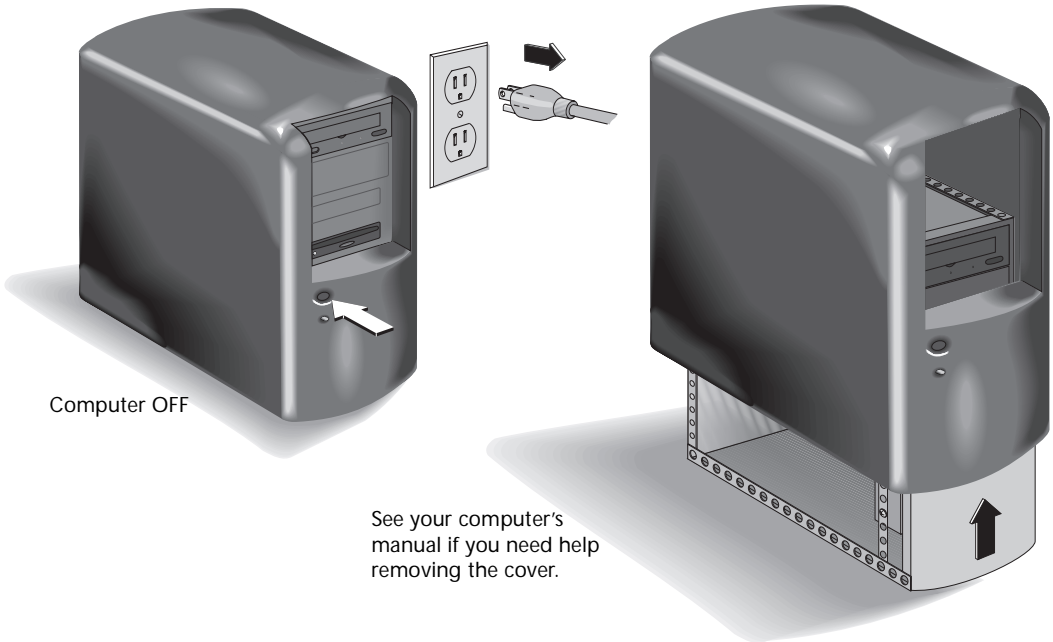
3. Run the Install Assistant program, if you have not already done so (see page 3).
4. Remove the Install Assistant diskette.
5. Turn OFF your computer, monitor, and other devices.

Unplug the power cables from the wall outlet or from the power strip, if you use one. (The power plug and outlet may look different in your country.)

6. Remove the cover from your computer.



**WARNING:** Be careful of any sharp edges that may be present inside your computer.



See your computer's manual if you need help removing the cover.

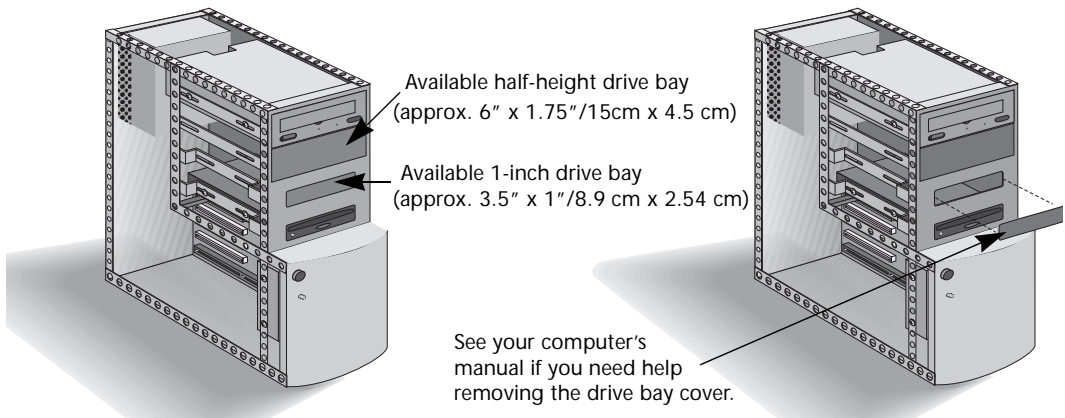


7. Refer to the printout from the Install Assistant (see page 3). Find the section labeled **ADDITIONAL IDE CARD REQUIRED?**

- If NO, skip this step.
- If YES, follow the directions in the *HP Colorado IDE Adapter Card Installation Guide* before continuing (contact your local vendor to purchase the card).

8. Do you want to install the tape drive in a larger “half-height” drive bay *or* a smaller “1-inch” drive bay?

Remove the cover plate from the desired drive bay.

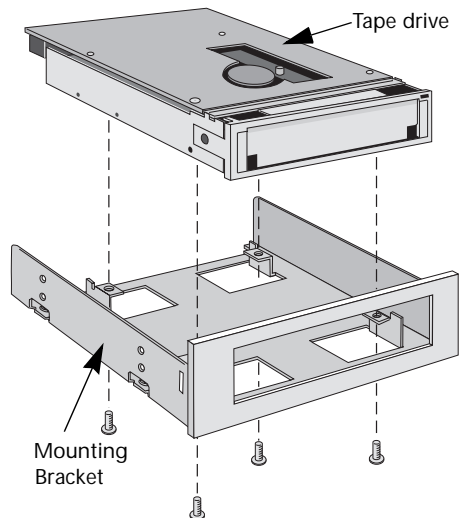


**TIP:** Keep any mounting hardware such as rails. You will need this hardware for securing the drive in step 11.

9. If you are installing the tape drive in a *larger* “half-height” drive bay, skip this step.

If you are installing the tape drive in the *smaller* “1-inch” drive bay, remove and discard the mounting bracket from the tape drive.

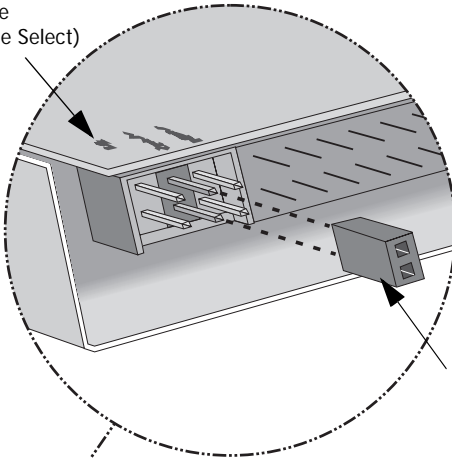
The smaller drive bay configuration (without mounting brackets) is illustrated in the remaining steps of this guide.





10. Refer to the printout from the Install Assistant (see page 3). Find the section labeled JUMPER SETTING? Set the jumper as advised.

Don't use  
CS (Cable Select)

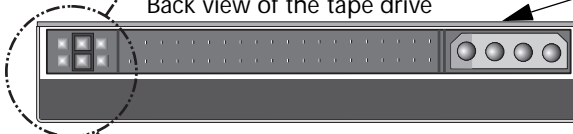


## Slave

Check the back of your tape drive and make sure the jumper is on the **center** location (Slave-SL).

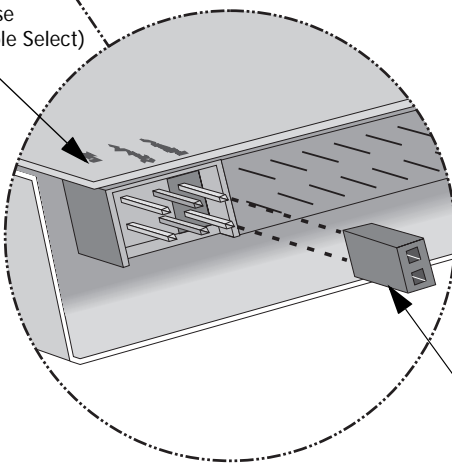
This is a jumper.

Back view of the tape drive



Green circuit  
board is the top  
of the drive

Don't use  
CS (Cable Select)

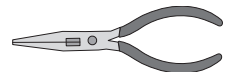


## or Master

Check the back of your tape drive and make sure the jumper is on the **right-hand** location (Master-MA).

This is a jumper.

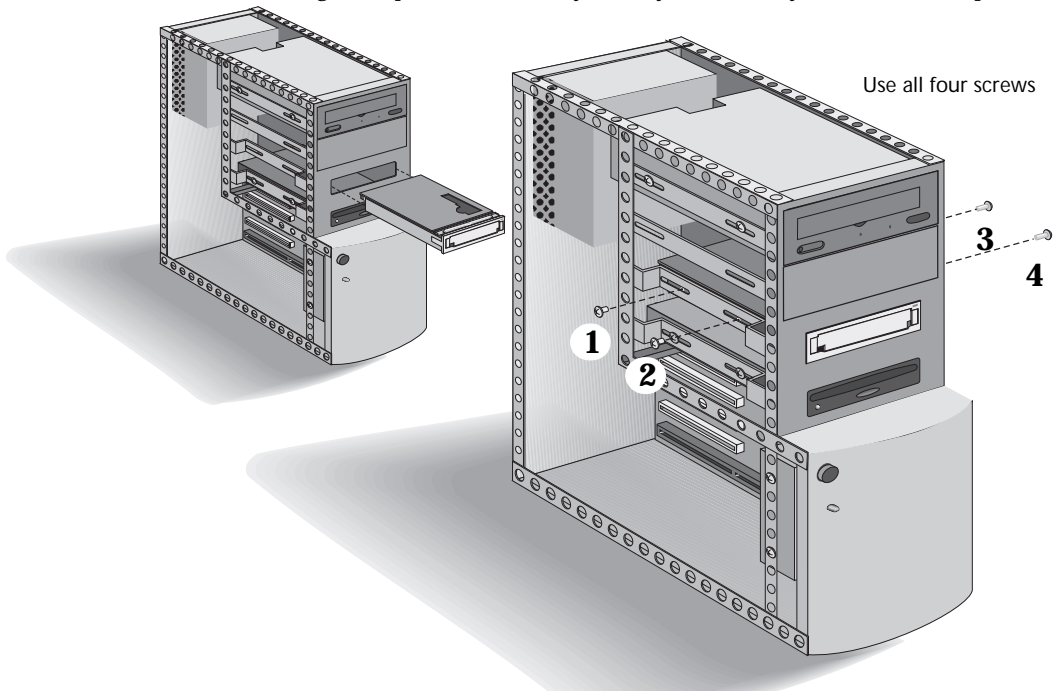
**TIP:** You can use needle-nose pliers if you need to move the jumper.



11. Insert the drive into the drive bay. Be careful not to dislodge any cables inside your computer as you do this.



**WARNING:** The drive requires a secure fit. If there is a gap of 1/8 inch (3.2 mm) or more on either side of the drive, you will not be able to secure it. In this case, obtain and attach “rails” from your computer manufacturer **BEFORE** inserting the tape drive. (You may already have what you need from step 8.)



12. If there is not much room around the back of the tape drive, it may be better to wait until step 17 to complete this step.

Secure the drive into the bay, using the screws included:

- if installing in the large drive bay, use the silver screws (#6-32 x 1/4" screws).
- if installing in the small drive bay, use the black screws (M3x0.5 x 6 mm metric screws).

The screws electrically ground the tape drive.



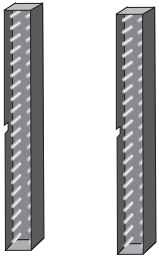


13. Refer to the printout from the Install Assistant (see page 3). Find the section labeled WHICH IDE CONTROLLER?

**TIP:** If the Install Assistant stated that your tape drive will share the data cable with another device (such as your CD-ROM), simply follow the cable already attached to that device down to the circuit board in order to locate the IDE controller that you need. If you find an extra connector along that cable, in the next step, simply attach the tape drive to that cable. Go to step 14 now.

Inside your computer, you *may* find up to five IDE controllers. Locate the 40-pin IDE controller that will be used by the tape drive as indicated by the Install Assistant:

- The first two IDE controllers (Primary and Secondary) are *usually* on the mother board of the computer.
- The third, fourth, or fifth IDE controller may be located on an expansion card or sound board and may not be labeled.

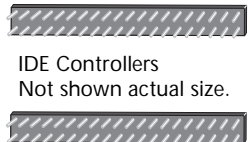


IDE Controllers

See your computer's manual if you need help finding the IDE Controller.

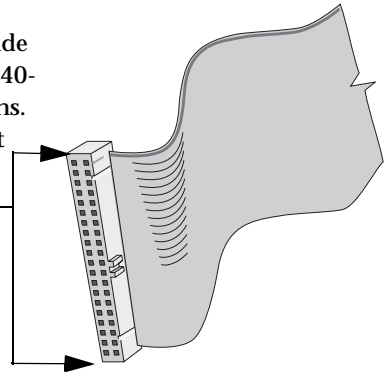
Computer manufacturers use a wide variety of labels for IDE controllers! Look on your computer's circuit boards for tiny printing such as:

- PRI and SEC (for primary IDE and secondary IDE)
- IDE-0 and IDE-1
- IDE-1 and IDE-2
- HD and CD-ROM (most common devices to be attached)
- PCI-IDE and ISA-IDE



IDE Controllers  
Not shown actual size.

You will see a variety of connectors inside your computer that look similar to the 40-pin connector but have more or less pins. Find the connectors that are the correct size to fit the cable that came in the box with your drive.





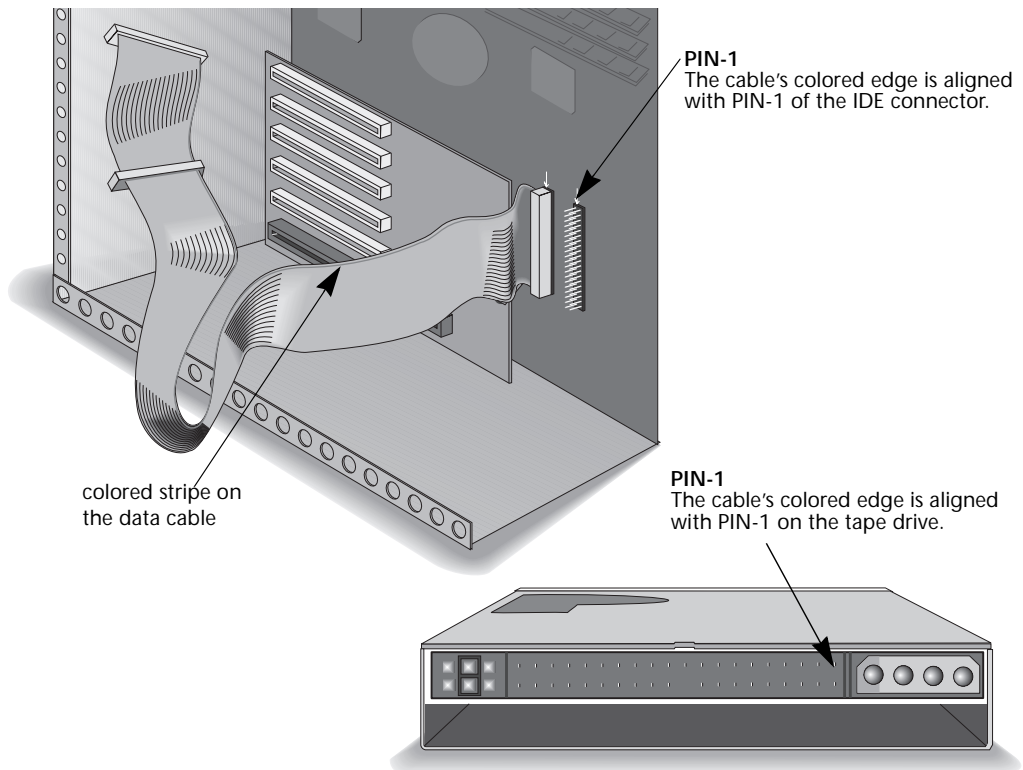
14. Refer to the printout from the Install Assistant (see page 3). Find the section labeled DATA CABLE INSTRUCTIONS?

Follow the instructions on the next page for either “One Device” or “Two Devices” as advised.

**TIP:** If you are sharing the IDE data cable between the HP tape drive and another device, when the HP tape drive is configured as “Slave” the other device must be configured as “Master.” Similarly, if the HP tape drive is configured as “Master” the other device must be configured as “Slave.”



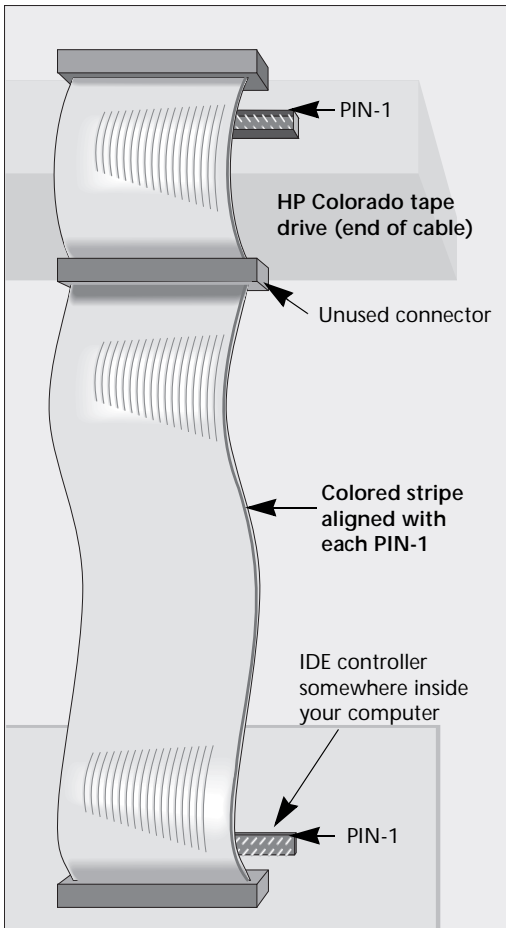
**CAUTION:** Make sure that you are attaching the cable correctly! You must locate PIN-1 on each connector and attach the cable so that the edge with the color stripe is aligned with PIN-1. If the cable is attached incorrectly, your computer may not boot up.



## One Device

The OPTIONAL data cable that came with the tape drive is *only* used if there is no cable already attached to the recommended IDE controller in your computer system or the cable supplied with your computer is not long enough.

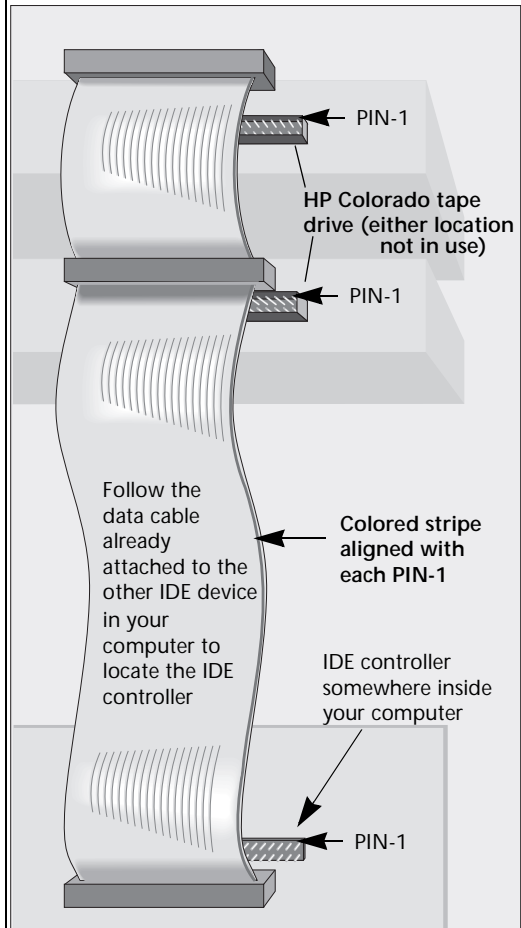
Use the connectors at the two ends of the cable.



## Two Devices

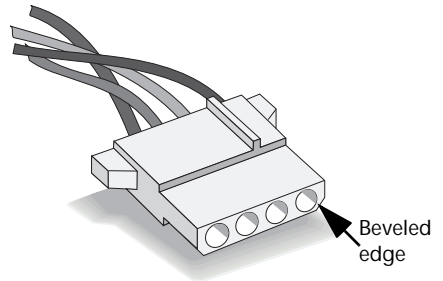
Attach the tape drive to *whichever connector is not in use* (center or end) on the data cable already installed in your computer (*DO NOT swap connectors*).

The OPTIONAL data cable that came with the tape drive is *only* used instead if there is no spare connector for the tape drive on your cable or your cable is not long enough.

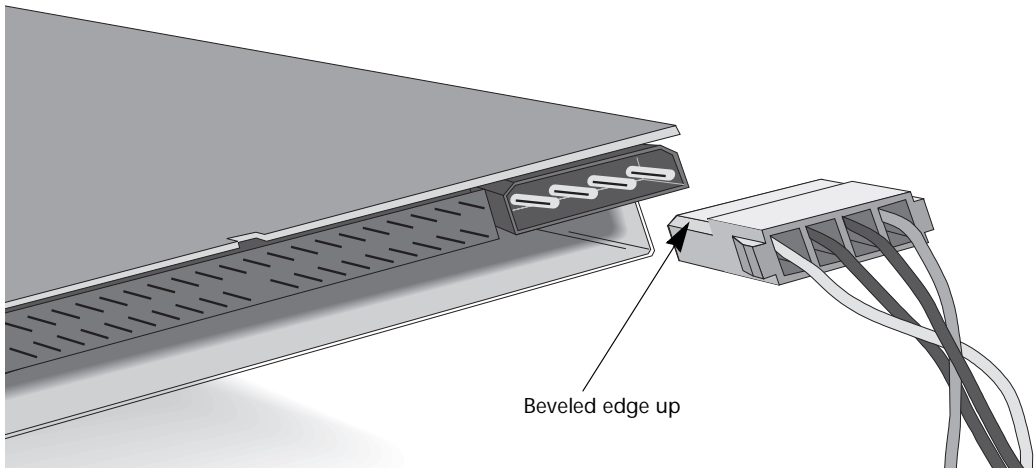


15. Locate your computer's power supply. Find an unused power cable leading from the power supply.

*NOTE: If you do not have an available power connector, you will need to purchase a Y-power cable that expands one power connector into two. Call your local computer hardware vendor to purchase one.*

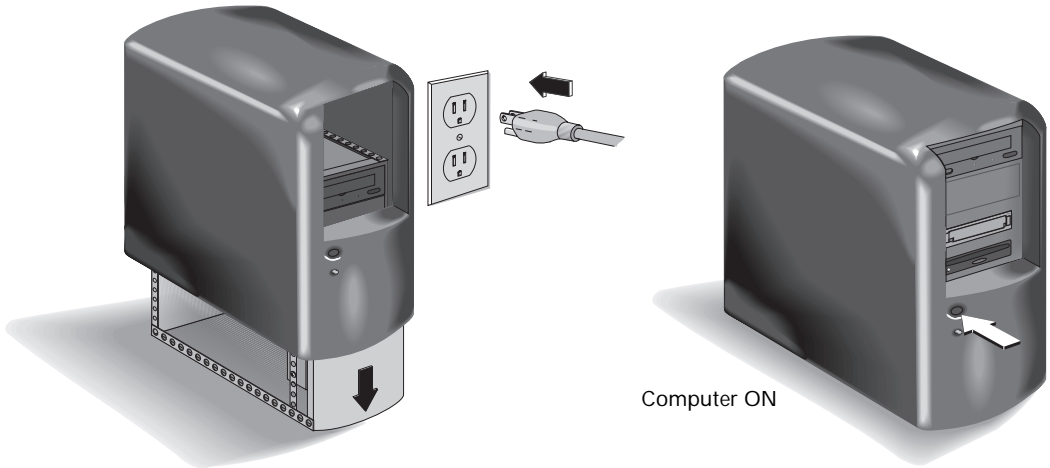


16. Plug the power cable into the back of the tape drive, with the beveled edge up.



17. If you skipped inserting the screws to secure the drive into the bay, do it now (see step 12).

18. Replace your computer's cover.



Plug your computer, monitor, and other devices into a wall outlet or power strip and turn ON your computer. (The power plug and outlet may look different in your country.)

**TIP:** If the drive is sharing the IDE controller with another device, confirm that the other device is still working properly.

19. Now, insert the diskette labeled *Run this first!* into your floppy drive and run the Install Assistant again to verify that the tape drive is installed correctly.

■ **For DOS and Windows 3.1:**

Exit to the DOS prompt, type `A:\ASSIST` (where A: is your floppy drive letter) and press ENTER.

■ **For Windows 95 and NT 4.0:**

Click on the **Start** button on the task bar, click on **Run**, type `A:\ASSIST` (where A: is your floppy drive letter) and click on **OK**.

20. Run the Install Assistant program and select "**Test...**" if the program doesn't select this automatically.
21. If successful, remove the Install Assistant diskette and go to page 16 for instructions on installing the Colorado Backup software.

If you are having problems, continue.

## If You Have Problems

Did you run the Install Assistant program first (*see page 3*)?

There are many factors that need to be taken into consideration when installing an IDE device. By running the Install Assistant program, you will know how to install successfully without needing to evaluate the technical details such as IRQs and “single” versus “dual” FIFO.

Does your computer meet the minimum system requirements

See “Minimum System Requirements” on page 42.

Can’t find the IDE controller in your computer?

Check the manual that came with your computer, call the computer manufacturer for assistance, or check their web site. The IDE controller may be located on the mother board, a daughter board, sound board, etc. It may be hard to find because it is behind another component inside your computer, such as the power supply. Or your computer may not have a connector attached for access to the IDE controller.

Now your computer won’t boot up!

- Turn off and unplug your computer. Double-check each connector along the data cable, look for and straighten any bent pins. The connectors are inserted properly when all pins are covered up and the colored stripe on the side of the data cable lines up with PIN-1 of each connector.
- Is the power cable attached correctly to each device?
- If you are sharing the IDE data cable between the tape drive and another device, did you change the data-cable (middle/end) connector attached to the device that was already inside your computer?

If yes, change the data-cable connector location back to the original position. The other device may be jumpered to “cable-select” rather than “Master” or “Slave.” If this is true, the location of the data-cable connector (middle/end) is very important.

What is wrong with sharing an IDE data cable with my hard drive?

The HP Colorado tape drive would run up to 25% slower since it has to take turns with your hard drive during a backup.

The device that is sharing the data cable with my HP Colorado tape drive doesn't show up in Explorer/File Manager or doesn't work any more.

- Turn off and unplug your computer.
- Make sure that the power cables are securely attached to both devices.
- If you are sharing the IDE data cable between the HP tape drive and another device, did you change the data-cable (middle/end) connector attached to the device that was already inside your computer?

If yes, change the data-cable connector location back to the original position. The other device may be jumpered to "cable-select" rather than "Master" or "Slave." If this is true, the location of the data-cable connector (middle/end) is very important.

#### Achieving optimal performance

Run SCANDISK.EXE and DEFRAG.EXE on your hard drive before using your tape drive for the first time (see your DOS, Windows 3.x or Windows 95 manual for more information). Then run them periodically after that. These programs improve access times to the hard drive, which will help improve the tape drive's performance.

#### Checking for resource conflicts

In rare cases, your computer's IDE controller may be having a resource conflict where another device is trying to use the IDE controller's I/O base address or interrupt request channel (IRQ). To check for this type of conflict:

- *In Windows 95*, right-click on the **My Computer** icon, select **Properties**, select the **Device Manager** tab, and double-click on **Hard Disk Controllers**, if the list is not already expanded. A yellow exclamation mark over the controller's icon confirms that the controller has the same or conflicting settings as another device installed on your system. Resolve this conflict by assigning a unique IRQ and I/O base address the other device.
- *In Windows NT 4.0*, if this type of conflict is present, you will see an error message when you start up Windows NT 4.0. Follow the directions in the error message box.

Check the read-me file on the software installation CD that came with your tape drive or the HP web site (see page 54) for any late-breaking troubleshooting information.

# Chapter 3: Installing the Software

## Installing the Software for Your Operating System

Your Colorado Backup software installation CD includes the files for installing the backup software for DOS, Windows, and Windows 95. Your tape drive can also be configured to work with Windows NT 4.0. Select the environment you work in and turn to the appropriate section for installation instructions:

- DOS — page 17
- Windows 3.1 or 3.11 — page 23
- Windows 95 — page 30
- Windows NT 4.0 — page 34

The Colorado Backup software for DOS, Windows 3.1, and Windows 95, and the Windows NT applet have the following interchangeability:

| You can restore backups using:          | You created the backup using:    |                                      |   |                              |
|---|----------------------------------|--------------------------------------|---|------------------------------|
|   | Colorado Backup for DOS ver. 5.0 | Colorado Backup for Windows ver. 3.1 | Colorado Backup for Windows 95 ver. 3.2 | Windows NT 4.0 Backup Applet |
| Colorado Backup for DOS ver. 5.0        | Yes                              | No                                   | Yes                                     | No                           |
| Colorado Backup for Windows ver. 3.1    | No                               | Yes                                  | No                                      | No                           |
| Colorado Backup for Windows 95 ver. 3.2 | Yes                              | Yes                                  | Yes                                     | No                           |
| Windows NT 4.0 Backup Applet            | No                               | No                                   | No                                      | Yes                          |



**CAUTION:** If you create backups under more than one operating system, use a separate set of tapes for each operating system. Label each tape appropriately.



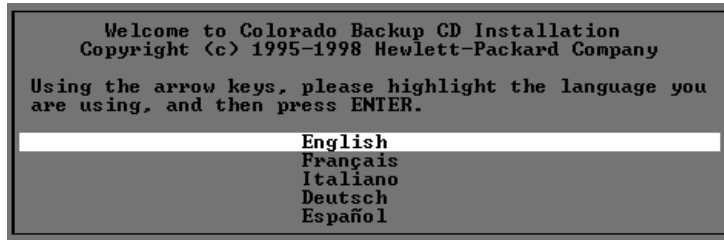
*NOTE: If your computer has a power-management feature that shuts off your computer after a specified period of time since the last keyboard input, you may experience problems with certain operations that exceed the time limit. Turn off the power-management feature when performing a long running operation such as a total or full-system backup. Check your computer's manuals to find out how to turn off or change the time limit of the power-management feature.*

## Installing Colorado Backup for DOS

*NOTE: Do not install Colorado Backup for DOS for use in Windows 95. This application does not support Windows 95 conventions such as long filenames and backups of the registry. See "Installing Colorado Backup for Windows 95" on page 30.*

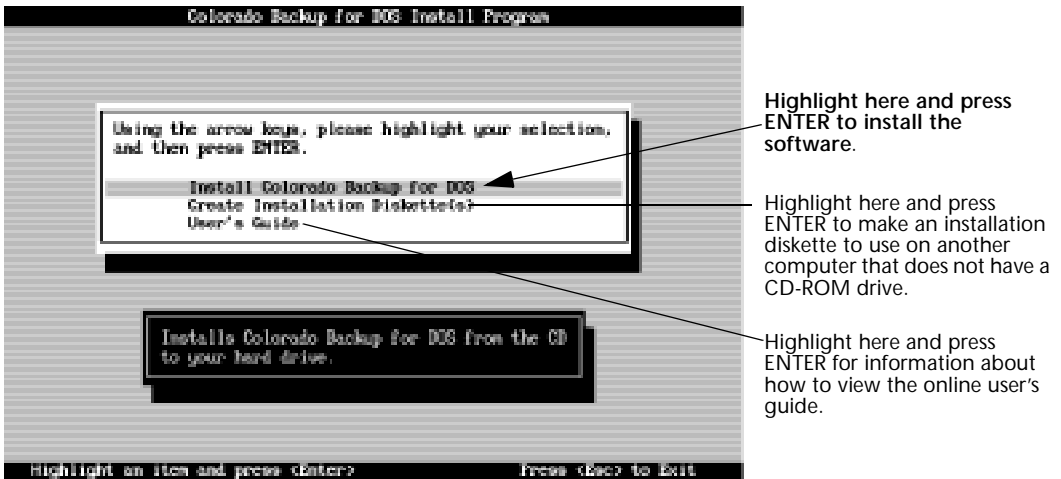
1. Install the tape drive as described in Chapter 1, "Installing the Hardware" on page 4. The drive must be installed before continuing.
2. Refer to the printout from the Install Assistant program that you made AFTER installing the tape drive. It will tell you how to configure the tape drive in the following steps.
3. Insert the software installation CD into your CD-ROM drive. If your computer does not have a CD-ROM, see page 42.
4. At the DOS prompt, type `D:\SETUP` and press ENTER (where D: is your CD-ROM's drive letter).

The following screen appears:



5. Select the desired language or leave the default and press ENTER.

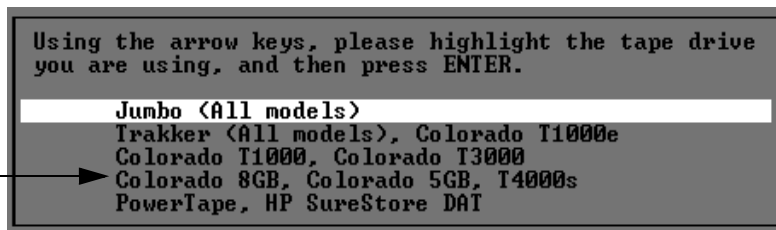
The following screen appears:



6. Select **Install Colorado Backup for DOS**.

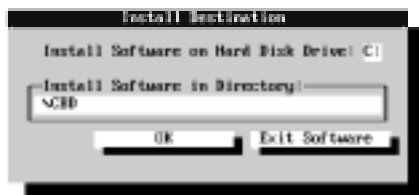
The following screen appears:

Highlight here  
and press ENTER.



7. Select **Colorado 8GB, Colorado 5GB, T4000s** and press ENTER.

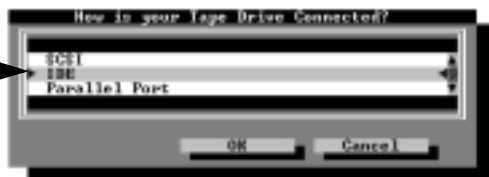
The following screen appears:



8. Either accept the default directory name of C:\CBD or type a different drive letter and directory name where you want Colorado Backup installed. Select **OK**.

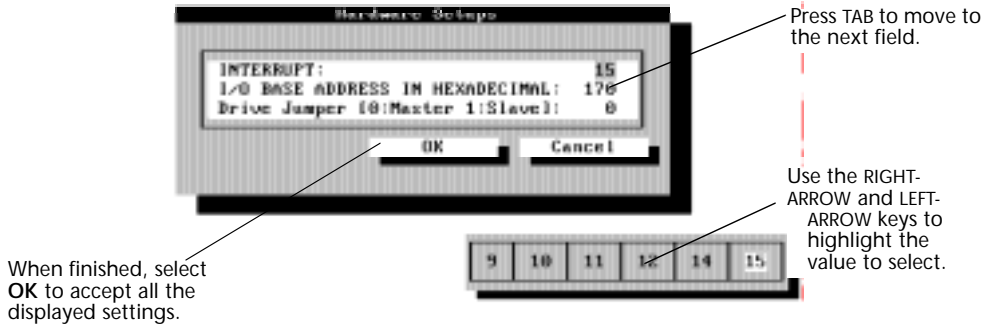
The following screen appears:

Highlight here and  
press ENTER.



9. Highlight **IDE** and select **OK**.

The following screen appears:



10. Refer to the printout from the Install Assistant program (*see page 13*) and set each field as instructed, then press ENTER.

- **Interrupt**—The Interrupt Request (IRQ) channel is used by the IDE controller to indicate to the computer that the drive is ready to send or receive information.
- **I/O Base Address**—A location in the computer's address space used by the IDE controller to communicate between software and hardware devices.
- **Drive Jumper Setting**—Two devices can be attached to each IDE controller, one device set to "Master" and one device set to "Slave."

The following screen appears:



11. If you want to be able to schedule backups to start automatically while you are away from your computer, press the spacebar to mark the check box. If you want to save the additional hard drive space required for this feature or do not wish to do unattended backups, leave the check box empty. Select **OK**.

The Colorado Backup files are then copied to your hard drive.

When all the files have been copied to your hard drive, the following screen appears:



12. If the letter of the drive from which your computer boots is not C:, enter the correct letter. (C: is the most common drive.) Select **OK**.
13. A screen appears indicating that the software installation was successful. Select **OK**. Colorado Backup automatically closes leaving you at the DOS prompt.
14. Remove the software installation CD from your CD-ROM drive and store it in a safe place.
15. Reboot by pressing CTRL+ALT+DEL.
16. To start the Colorado Backup software, at the DOS prompt type CD \CBD (or the name of the installation directory you entered in step 8.) and press ENTER.
17. Type TAPE and press ENTER.

The main screen appears:

**Menu bar:** Select menu commands from here.

**Command push buttons**

To copy files from your hard drive to a tape, select this button.

To restore files on tape to a hard drive, select this button.

To compare files on tape to files on your hard drive (in order to verify that you will be able to restore your backup), select this button.



**Status line:**  
Displays a short help message.

18. If the Colorado Backup window does not appear or you receive an error message, see “If You Have Problems” on page 34.

If you are ready to perform tape operations, read:

- “Using Tapes and Caring for Your Tape Drive” on page 37.
- The online *Colorado Backup User's Guide* or click on **Help!** inside the software to learn how to back up and restore data, compare files, and use the application's options and features.

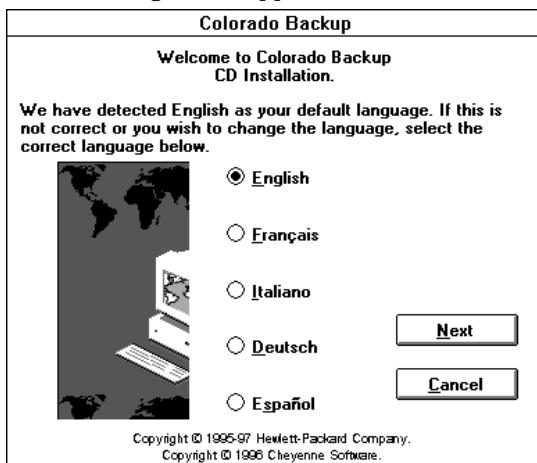
For more information on accessing the *User's Guide*, see “Viewing the Online User's Guide” on page 2.

## Installing Colorado Backup for Windows (3.1 or 3.11)

*NOTE: Do not install Colorado Backup for Windows for use in Windows 95. This application does not support Windows 95 conventions such as long filenames and backups of the registry. See "Installing Colorado Backup for Windows 95" on page 30.*

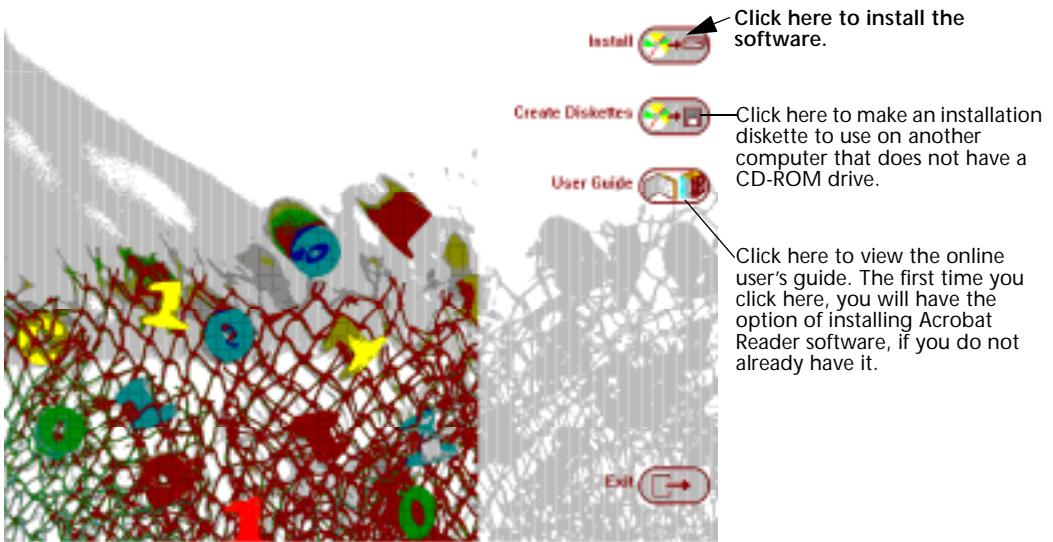
1. Attach the tape drive as described in Chapter 1, "Installing the Hardware" on page 4. The drive must be attached to install and configure the software.
2. Refer to the printout from the Install Assistant program that you made AFTER installing the tape drive. It will tell you how to configure the tape drive in the following steps.
3. Insert the software installation CD into your CD-ROM drive. If your computer does not have a CD-ROM, see page 42.
4. In Windows, open the Program Manager window, if it is not already open.
5. From the Windows' Program Manager, Click on the **File** menu and select **Run**. The Run box appears.
6. In the Command Line box, type `D:\SETUP` and press ENTER (where D: is your CD-ROM's drive letter).

The following screen appears:



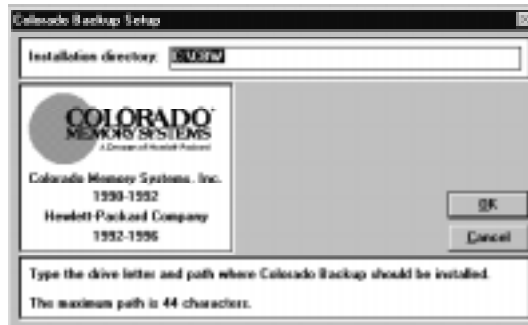
7. Select the desired language or leave the default and click **Next**.

The following screen appears:



8. Click on the **Install** button.

The following screen appears:



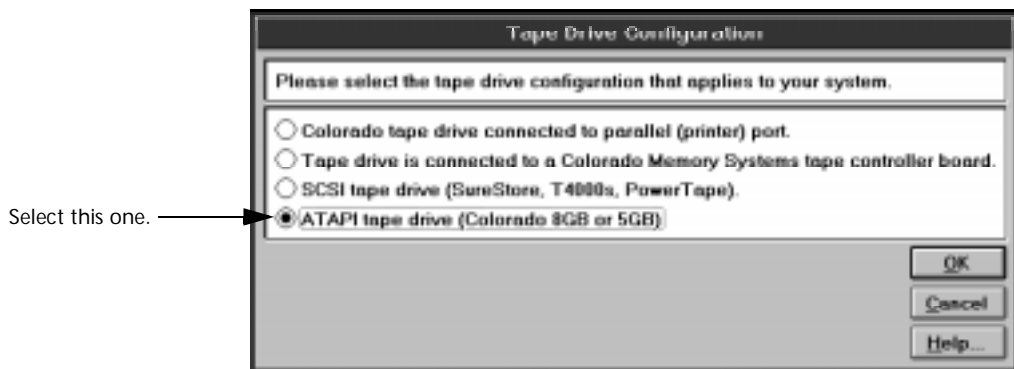
9. Either accept the default directory of C:\CBW or type in a new directory name. Then click on **OK**.
10. A dialog box appears explaining that the installation process must alter your AUTOEXEC.BAT, CONFIG.SYS, WIN.INI, and SYSTEM.INI files. Current copies of these files are saved with the extension OLD in the directory indicated in the previous step. Click on **OK** to proceed.



The Colorado Backup files are then copied to the directory indicated in step 9.

11. After the files are copied, the Colorado Backup main window appears with a dialog box indicating that Windows needs to be restarted before Colorado Backup will work properly. Make sure all applications are closed and click on **OK**. Colorado Backup and Windows are exited and restarted. When the main window reappears, you are ready to configure the tape drive.

Configuration begins with the following dialog box. Click on any **Help** button if you need more information about the displayed dialog box.



12. Click on **ATAPI tape drive (Colorado 8GB or 5GB)**, then select **OK**.

The following screen appears:



13. Refer to the printout from the Install Assistant program (*see page 13*) and set each field as instructed, then click on **OK**.
  - **I/O base address**—A location in the computer's address space used by the IDE controller to communicate between software and hardware devices.
  - **IRQ**—The Interrupt Request (IRQ) channel is used by the IDE controller to indicate to the computer that the drive is ready to send or receive information.
  - **Master/Slave** —Two devices can be attached to each IDE controller, one device set to “Master” and one device set to “Slave.”
14. The Boot Drive dialog box appears prompting you for the drive from which your computer boots (starts). Make sure the correct drive letter is entered and click on **OK**.
15. A dialog box appears indicating that the software installation was successful and that you must exit Windows and reboot your computer to complete the configuration process. Click on **OK**.
16. Exit Windows and, from the DOS prompt, reboot your computer by pressing CTRL+ALT+DELETE.
17. Start Windows and double-click on the **Backup** icon in the new Colorado Backup group.

The following dialog box appears:



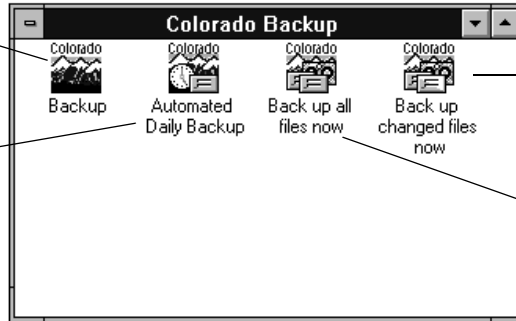
Note the instructions for scheduling an automatic system backup.

18. Click on **OK**.

Colorado Backup for Windows shuts down and you are left in Windows' Program Manager with the Colorado Backup for Windows program group displayed:

Double-click on this icon to start Colorado Backup.

Double-click on this icon to set up an automated backup schedule.



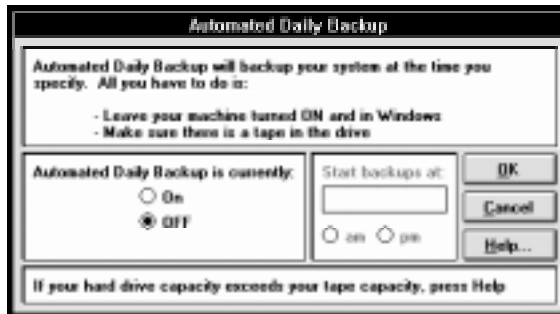
Double-click on this icon to backup all files that have changed since your last backup.

Double-click on this icon to start a backup of *all* files on all local hard drives.

The software is now installed. You can open the software and make your first backup, or you can set up the Automated Daily Backup as described in the following steps.

19. If you want Colorado Backup to make backups automatically, double-click on the **Automated Daily Backup** icon in the Colorado Backup for Windows program group.

The scheduling dialog box appears.



When turned on, the Automated Daily Backup feature creates the following operations:

- **Automated Total**—This operation runs each Monday. The tape is erased to make room for a Total backup of all detected local hard drives. It then copies *all* files—applications, systems files, and data files—from each detected local hard drive. The files on tape are then

compared to the original hard drive files to ensure their accuracy. This provides a complete copy of your hard drive(s) at the time of the backup.

- **Automated Modified**—This operation runs each day from Tuesday to Sunday, backing up only files that have been edited or added since your last backup. Each backup creates a separate volume which is added to the tape after each previous backup volume. The combination of Monday's Total and the six Modified backups give you an up-to-date copy of all files.
20. To create an automated backup system, select **On**. The default time of 11:59 p.m. (23:59 if you are using a 24-hour clock) appears as the scheduled time for the daily backup.
  21. Accept the default time or enter the time you prefer to have your backups run automatically. Click on **OK**.
  22. An explanation of the Automated Daily Backup appears. Click on **OK**.

An icon labeled Colorado Scheduler appears on your desktop.

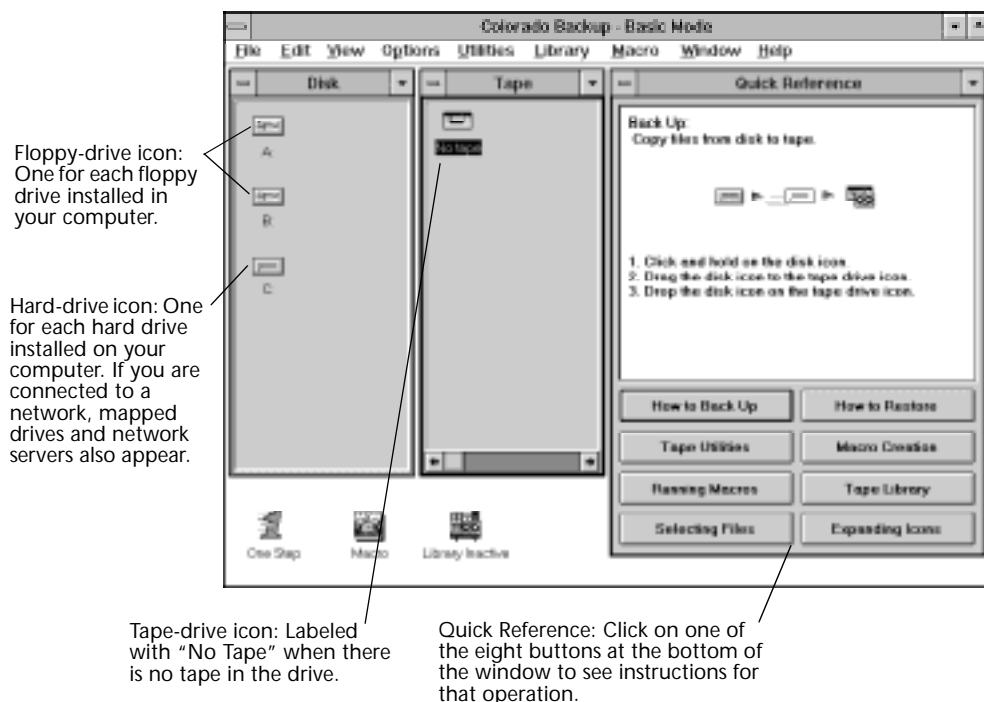


— This icon indicates the Automated Daily Backup is on and the daily operation will run at the scheduled time.

The presence of the icon indicates that the macros will run at their specified times if you:

- Leave a tape in your tape drive
  - Exit out of Colorado Backup for Windows
  - Leave your computer on with Windows running
23. Remove the software installation CD from your CD-ROM drive and store it in a safe place.
  24. To open Colorado Backup, double-click on the **Backup** icon.

The Colorado Backup main window appears.



25. If the Colorado Backup window does not appear or you receive an error message, see "If You Have Problems" on page 34.

If you are ready to perform tape operations, read:

- "Using Tapes and Caring for Your Tape Drive" on page 37.
- The online *User's Guide* or the online **Help** to learn how to back up and restore data, compare files, and use the application's options and features.

For more information on accessing the *User's Guide*, see "Viewing the Online User's Guide" on page 2.

## Installing Colorado Backup for Windows 95

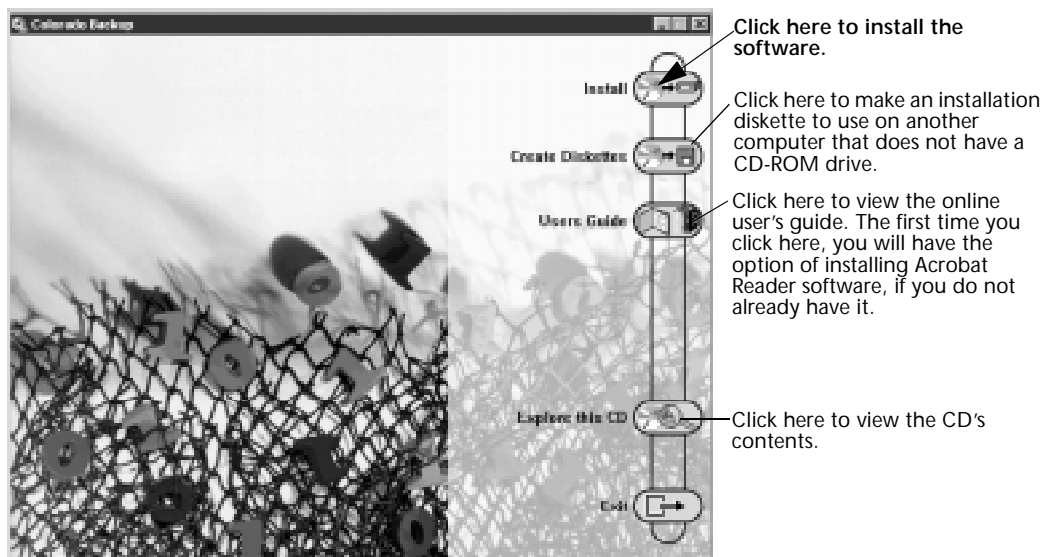
*NOTE: Do not use Colorado Backup for Windows 95 to backup Novell servers. Colorado Backup for DOS can backup Novell 2.x and 3.x servers or Colorado Backup for Windows (3.1 or 3.11) can backup Novell 3.x servers.*

*NOTE: Colorado Backup for Windows 95 can back up computers over your Windows 95 and Windows for Workgroups networks. However, Colorado Backup for Windows 95 will only back up the Windows 95 registry of the computer to which your tape drive is attached. The Windows 95 registry of a remote computer will not be backed up.*

1. You will need two formatted, 3.5" (1.44 MB) diskettes labeled "Recovery Disk #1" and "Recovery Disk #2" to use in step 13.
2. Attach the tape drive as described in Chapter 1, "Installing the Hardware" on page 4. The drive must be attached to install and configure the software.
3. Insert the software installation CD into your CD-ROM drive. If your computer does not have a CD-ROM, see page 42.
4. If the first screen does not appear automatically, click the **Start** button on the Windows 95 task bar, select **Run**, type D:\SETUP (where D: is your CD-ROM's drive letter), then click on **OK**. The following screen appears:



5. Select the desired language or leave the default. Click on **Next**. The following menu appears:

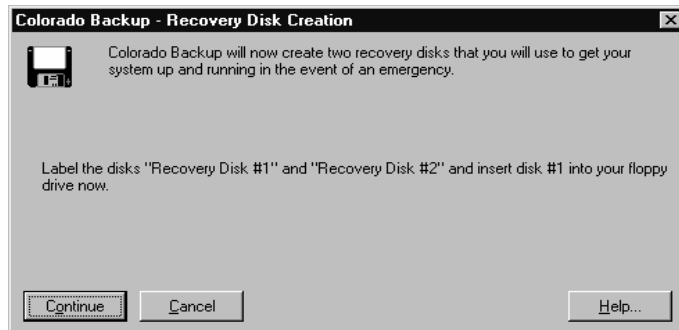


6. Click on the **Install** button. Follow the instructions on the screen.
7. When prompted to restart your computer, click on **Yes**. Your computer is restarted and Windows 95 reappears with the **Colorado Backup** icon on the desktop.
8. Exit the menu window and remove the software installation CD from your CD-ROM drive and store it in a safe place.
9. To start Colorado Backup, double-click on the **Colorado Backup** icon that appears on your desktop, *or*:
- Click the **Start** button.
  - Highlight **Programs**.
  - Select the **Colorado Backup** program group.
  - Select the **Colorado Backup** program.
10. A registration screen appears. Follow the instructions on the screen to register your Colorado Backup software.

11. The Recovery Disk Creation screen appears:



12. Click on the **Create Recovery Disks Now** button. The following screen appears:



13. Insert the formatted, 3.5" (1.44 MB) diskette labeled "Recovery Disk #1" into your floppy drive. You must use your primary, or bootable floppy drive. Click on **Continue**.
14. When prompted, remove Recovery Disk #1 from the drive and insert the diskette labeled "Recovery Disk #2." Click on **OK** to continue.



15. Click on **Continue**. When all the necessary files have been copied to the diskette, the following screen appears:



16. Remove "Recovery Disk #2" from the floppy drive and write protect both diskettes. Store the two recovery disks together in a safe place.
17. Click on **OK**. The Colorado Backup main window appears.



18. If the Colorado Backup window does not appear or you receive an error message, see "If You Have Problems" on page 34.

If you are ready to perform tape operations, read:

- "Using Tapes and Caring for Your Tape Drive" on page 37.
- Read the *User's Guide* or the online **Help** to learn how to back up and restore data, compare files, and use the application's options and features. To read the online help while you are using Colorado Backup, select **Help** from the menu bar.

For more information on accessing the *User's Guide*, see "Viewing the Online User's Guide" on page 2.

## Configuring the drive for Windows NT 4.0

Your HP Colorado tape drive can be successfully installed with Windows NT 4.0. Use the backup application that is part of the standard Windows NT 4.0 setup. Do not install the Colorado Backup software that came with your tape drive.

1. Install your tape drive as directed in “Installing the Hardware” on page 4.
2. Start up your computer and log in with Administrative rights.
3. Go to the **Control Panel** and choose the **Tape Devices** icon.
4. Go to the **Drivers** tab and click on **Add**.
5. Windows NT creates a list of tape drivers. Click on the **Have Disk** button.
6. When prompted to enter the path for the manufacturer's files, type D: \NT (where D: is you CD-ROM's drive letter). If your computer does not have a CD-ROM, see page 42.
7. Click **OK**.
8. A list of tape devices appears. Select **Hewlett-Packard Colorado IDE**. The necessary files are copied to your system.
9. Restart the system when prompted. If no services fail, the drive is ready to use. If services fail, please contact our QuickFax service for document 5228. The QuickFax phone numbers are listed on page 54.
10. Start the Backup application by clicking on **Start, Programs, Administrative Tools, and Backup**.
11. Use NT Backup online **Help** to learn how to back up and restore data, compare files, and use the application's options and features.

## If You Have Problems

If you receive any error messages when starting Colorado Backup, check the following items:

- Exit out of all applications. Turn off the computer's power, wait 20 seconds, then turn it on again. (This is called *cycling power*.) Then start Colorado Backup.
- Verify that your computer meets the requirements listed in

“Minimum System Requirements” on page 42 for the operating system in which you are using Colorado Backup.

- Does the drive move the tape when the tape is inserted? If not, check the power connections to the tape drive.
- Are all of your peripheral devices plugged in and turned on?
- Are all the expansion boards inside your computer firmly seated?
- Are all cables inside your computer connected to the appropriate device or expansion board?
- Are peripheral and power connectors plugged into the back of your computer?
- Your IDE controller may be using the same IRQ setting as some other device in your computer system. For example, a sound board or fax/modem board may be using the same IRQ (see “Checking for resource conflicts” on page 15).
- Defragment your hard drive using a defragmenting application or utility (see “Achieving optimal performance” on page 15).
- Make sure you are using the right type of tape. See “Choosing Tapes for Your Tape Drive” on page 37.
- **Windows and Windows 95 users:** If the tape-drive icon appears with a red mark through it, the software either cannot find the drive at the selected settings, or the inserted tape is not compatible. (Windows 3.x users can click on the tape icon to read the error message.) Exit the software and restart it. If the mark remains, try the operation with a different tape.
- If your computer has a power-management feature that shuts off your computer after a specified period of time since the last keyboard input, you may experience problems with certain operations that exceed the time limit. Turn off the power-management feature when performing a long running operation such as a total or full-system backup. Check your computer’s manuals to find out how to turn off or change the time limit of the power-management feature.

The computer is trying to boot up from the HP Colorado tape drive or receiving “Invalid Media” error message

- If the computer is trying to boot up the operating system from the HP Colorado tape drive, simply remove the tape from the tape drive when starting up your computer.
- To get your computer to stop this behavior, you need to change the

“boot order” settings in your CMOS program. To learn how, see the documentation that came with your computer or call the computer manufacturer.

# Chapter 4: Using Tapes and Caring for Your Tape Drive

## Choosing Tapes for Your Tape Drive

To ensure the highest level of performance, HP Colorado brand tapes (which have been fully tested with your drive) are recommended.

| Part No | Product                             | HP Colorado T3000 | HP Colorado 5GB | HP Colorado 8GB | HP Colorado 4i/e |
|---------|-------------------------------------|-------------------|-----------------|-----------------|------------------|
| C4427A  | 1 pack TR-3 3.2 GB minicartridge    | RW                | R               | R               |                  |
| C4427B  | 2 pack TR-3 3.2 GB minicartridge    | RW                | R               | R               |                  |
| C4427D  | 5 pack TR-3 3.2 GB minicartridge    | RW                | R               | R               |                  |
| C4429A  | 1 pack HP Colorado 5.0 GB cartridge |                   | RW              | RW              | RW               |
| C4429B  | 2 pack HP Colorado 5.0 GB cartridge |                   | RW              | RW              | RW               |
| C4429D  | 5 pack HP Colorado 5.0 GB cartridge |                   | RW              | RW              | RW               |
| C4425A  | 1 pack TR-4 8.0 GB minicartridge    |                   |                 | RW              | RW               |
| C4425B  | 2 pack TR-4 8.0 GB minicartridge    |                   |                 | RW              | RW               |
| C4425D  | 5 pack TR-4 8.0 GB minicartridge    |                   |                 | RW              | RW               |

RW Read/Write, R Read only

**In Windows 95 only**, your tape drive can also read from but NOT write to backup tapes made using Colorado Backup software and a Jumbo 250, 350, 700, 1400; Trakker 250, 350, Or 700; T1000; or T3000 tape drive.

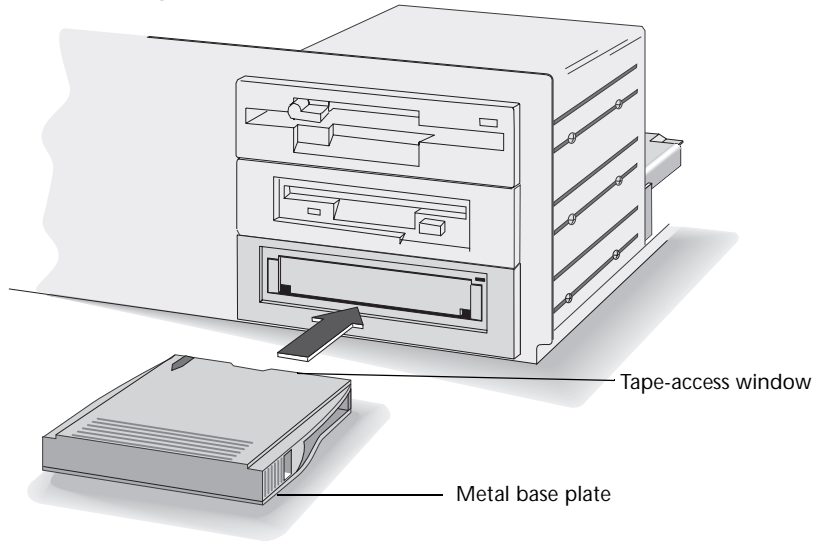
The following section explains how to insert your tapes. Please note the differences between the HP Colorado cartridges and the standard mini-data cartridge when they are fully inserted.



*CAUTION: Do not erase C4425 or C4429 tapes with bulk erasers. Magnetic bulk erasing removes tracking reference points that are placed on the tape at the factory. Without these points, the tapes cannot be read by your tape drive. The Erase utility in Colorado Backup is the safest and quickest method of removing data from your tapes.*

## Inserting Tapes

1. Hold the tape with the metal base plate down and the tape-access window facing the drive.



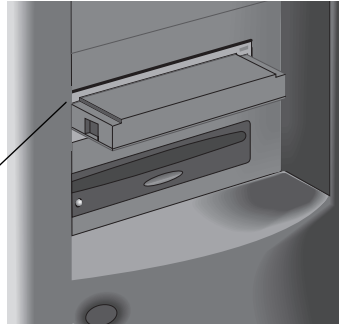
2. Align the tape with the tape drive's opening and push the tape firmly into the drive. You will feel it lock into place.

After the cartridge is inserted, you will hear the sound of the tape being wound back and forth. This sound indicates that the tape drive is finding the beginning of the tape, determining the tape's length and format, and positioning the drive's read/write head.

Note the differences between the two cartridge types when they are fully inserted as shown in the following illustrations:

HP Colorado cartridge or  
Travan cartridge

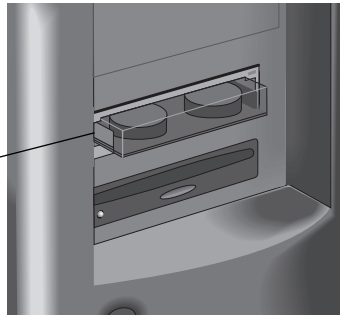
The wider Travan  
cartridge spans the entire  
width of the drive's  
opening.



Approximately 1"  
(2.5cm) of the cartridge  
extends out of the drive  
when fully inserted.

Standard mini cartridges

Mini-data cartridges are  
narrower, leaving gaps on  
each side of the tape  
when inserted.



Approximately 0.75"  
(2cm) of the cartridge  
extends out of the drive  
when fully inserted.

## Removing Tapes

1. Wait until the light on the front of your tape drive quits blinking. (**DO NOT** remove a tape during an operation. See the CAUTION note below.)
2. Grasp the tape cartridge firmly and pull it straight out from the drive.



**CAUTION:** Interfering with a tape during operations may cause data loss, and may make the tape temporarily unrecordable. If, during a backup, you pull the tape out of the drive, turn off the power to the computer, or firmly bump the tape, you will not be able to read the data currently written to the tape. Also, the tape will not be recordable until it is erased with Colorado Backup's Erase utility. (Never use a magnetic bulk eraser to erase your HP Colorado tapes. Bulk erasers remove reference points on the tape that are vital. Removing these points makes tapes unusable.)



## Caring for Your Tape Drive

You do not need to perform any routine maintenance on the HP Colorado tape drive.



*CAUTION: Do NOT clean the read/write head of an HP Colorado tape drive.*



*CAUTION: Do NOT degauss or demagnetize the read/write head of an HP Colorado tape drive. Damage to your tape drive will result.*

# Chapter 5: Technical Information

## Minimum System Requirements

Your computer must meet or exceed these requirements:

- **An IBM-compatible computer** (486/16 MHz class or higher for DOS and Windows 3.1 or 3.11, 486/25 MHz class or higher for Windows 95 or Windows NT 4.0).
- **An available space on an IDE controller (ATA-2 or EIDE).**
- **One available installation bay.**
- **A CD-ROM drive to install the backup software.**

**If your computer does not have a CD-ROM drive:**

You can make installation diskettes by using another computer to which you have access.

Insert the software installation CD, run the SETUP program, and select **Create Installation Disks**. From the diskettes, run either INSTALL (DOS) or SETUP (Window 3.x, Windows 95 or NT).

- If you need special rails, cables, or other accessories to install the tape drive, contact your computer manufacturer or local computer hardware vendor to purchase them.
- See the operating system requirements on the following pages.

## Colorado Backup for DOS Requirements

Installing Colorado Backup for DOS requires:

- **DOS 5.0 or higher.** To identify your version, type VER at the DOS prompt and press ENTER.
- **A minimum of 512 KB of conventional memory.** Performance is likely to improve with more available memory. To check free memory, type MEM at the DOS prompt and press ENTER. The value listed after “Largest executable program size” should be at least 524,288.
- **6 MB of available hard drive space** (1 MB for the software and an additional 5 MB of space for operations overhead). To check available hard drive space, type CHKDSK at the DOS prompt and press ENTER. “Bytes available on hard drive” should be at least 6 MB.

## Colorado Backup for Windows Requirements

Installing Colorado Backup for Windows requires:

- **Windows version 3.1 or 3.11 running in 386 Enhanced mode.** To verify your version and mode, from the Program Manager, open the **Help** menu, then select **About Program Manager**. The software version is listed and “386 Enhanced Mode” must appear in the box.
- **4 MB of RAM in Windows 3.1**  
**8 MB of RAM in Windows for Workgroups**
- **10 MB of available hard drive space** (5 MB for the software and an additional 5 MB of space for operations overhead). To check available hard drive space, double-click on the **File Manager** icon in the **Main** program group. Then click on the icon for the hard drive where Colorado Backup is to be installed (C: is the default). The amount of free hard drive space appears at the bottom of the window. It must be at least 10,000 KB.

In addition, the following is recommended but not required:

- Your computer might be running either the SHARE.EXE or VSHARE.386 (but not both). If either is running, you will find SHARE.EXE in either your CONFIG.SYS or AUTOEXEC.BAT file, and VSHARE.386 will be in your SYSTEM.INI file.

See your *Microsoft Windows User's Guide* for more information.

## Colorado Backup for Windows 95 Requirements

Installing Colorado Backup for Windows 95 requires:

- **Windows 95**
- **8 MB of RAM**
- **20 MB of available hard drive space** (15 MB for the software and an additional 5 MB of space for operations overhead). To check available hard drive space, double-click on **My computer**; click on the icon representing the hard drive on which the backup software will be installed; open the **File** menu and select **Properties**. Available hard drive space must be at least 20 MB.

## Windows NT 4.0

You can use the Windows NT Backup applet with this tape drive.

## LAN Installation

When using Colorado Backup on a LAN, the tape drive *hardware* and *software* must be installed in a workstation. Do not install them on the network server. For other LAN installation options, call the Customer Support phone number listed on page 54.

*NOTE: Do not use Colorado Backup for Windows 95 to backup Novell servers. Colorado Backup for DOS can backup Novell 2.x and 3.x servers or Colorado Backup for Windows (3.1 or 3.11) can backup Novell 3.x servers.*

*NOTE: Colorado Backup for Windows 95 can back up computers over your Windows 95 and Windows for Workgroups networks. However, Colorado Backup for Windows 95 will only back up the Windows 95 registry of the computer to which your tape drive is attached. The Windows 95 registry of a remote computer will not be backed up.*

## What Affects Performance

How well your new HP tape drive functions, particularly how fast it writes data to tape, depends on a number of factors. Some of these factors are listed below.

**Processor (CPU).** The type and speed of your processor greatly affects the speed at which your computer transfers data to and from the tape drive.

**RAM.** Your computer must have enough memory available to handle its operating system, the backup software, and the data you are transferring to and from tape. The system should not have to swap data to and from the hard drive. Shut down other programs during a backup to ensure optimal speed.

**IDE Interface Type:** To use the internal tape drive, your computer requires an available connector on an IDE controller. Your computer may have a "Single-FIFO" or "Dual-FIFO" IDE controller. If it is "Single-FIFO," the tape drive will run 12-25% slower than with a "Dual-FIFO" IDE controller. Insert the *Install Assistant* diskette, run `ASSIST.EXE /S` to see an evaluation of your computer system.

**Hard Drive.** If you attach the HP Colorado tape drive to the same IDE controller as a hard drive, the tape drive will run slower because it must take turns using the data cable with the hard drive.

**For optimal performance,** run `SCANDISK.EXE` and `DEFRAG.EXE`. See "Achieving optimal performance" on page 15.

*NOTE: Refer to your computer and mother board manuals or contact your computer vendor if you have any questions about your computer's configuration or capabilities.*

## Drive Specifications

### Backup Speed

*Performance will vary greatly depending on the speed of your system, the current fragmentation of your hard drive, and the number and type of files being backed up.*

Data transfer rate: up to 648 KBps

Tape speed, Read/write: up to 102 inches per second

Search/rewind: 120 inches per second

Load time: 15 seconds

### Tape Format

QIC-3095

Number of tracks: 73

Bit density: 67,733

Encoding method: RLL1,7

Error Correction: 6-level Reed-Solomon

### Interface

ATAPI

### Reliability Specifications

Hard error rate: <1 in  $10^{15}$  bits read with Reed-Solomon ECC

Mean time between failure: 250,000 hours predicted

Warranty: 2-year limited warranty

### Power Requirements

+5 Vdc @ 0.7 A

+12 Vdc @ 1.0 A

### Specified Operating Temperature

Minimum: 5° C (41° F)

Maximum: 40° C (104° F)

## Certifications

UL, cUL, TÜV, CE, meets or exceeds FCC Class B requirements

## Canadian Standards Association Information Statement

### INSTRUCTION TO USER:

**WARNING:** This component is only considered to be approved when installed in CSA certified equipment evaluated to the standards C22.2 No. 220-M1986 or C22.2 No. 950-M89. The operator accessibility into the end use enclosure is defined with strict accordance in the operator's manual for the installation of components into the equipment.

## User's manual statement for VCCI class B product

この装置は、情報処理装置等電波障害自主規制協議会（V C C I）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると受信障害を引き起こすことがあります。  
取り扱い説明書に従って正しい取り扱いをして下さい。

### Translation for VCCI class B product

This equipment is in the Class B category information technology equipment based on the rules of Voluntary Control Council For Interference by Information Technology Equipment (VCCI). Although aimed for residential area operation, radio interference may be caused when used near a radio or TV receiver.

Read the instructions for correct operation.

## Korean RRL Statement

### 사용자 안내문 (B급 기기)

이 기기는 비업무용으로 전자파장애경감을 받은 기기로서, 주거지역을 물론 모든 지역에서 사용할 수 있습니다.

## Notice

Europe: This drive shall be installed only with an EN60950 (IEC950) approved Power supply.

USA/Canada: This drive is for use only with IBM compatible UL<sup>®</sup> listed personal computers.

## Federal Communications Commission R.F. Interference Statement

**WARNING:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Information for user:

**CAUTION:** Changes or modifications of this equipment not expressly approved by Hewlett-Packard, could result in violation of Part 15 of FCC rules.

| <b>DECLARATION OF CONFORMITY</b><br>according to ISO/IEC Guide 22 and EN 45014   |   |
|--|---|
| <b>Manufacturer's Name:</b>  | Hewlett-Packard Company   |
| <b>Manufacturer's Address:</b><br><b>declares that product</b>   | 815 SW 14th Street, Building E<br>Loveland, Colorado 80537  |
| <b>Product Name:</b>   | HP Colorado 5GB internal  |
| <b>Product Number:</b>   | C4354A  |
| <b>Product Options:</b>  | All   |
| <b>conforms to the following Product Specifications:</b>   |   |
| <b>Safety:</b>   | EN60950:1992 +A1:1993, +A2:1993, +A3:1995   |
| <b>EMC:</b>  | EN 55022:1994 Class B<br>EN 50082-1:1992<br>IEC 801-2:1991 - 4kV CD, 8kV AD<br>IEC 801-3:1984 - 3V/m<br>IEC 801-4:1988 - 1kV Power Lines, 0.5kV Signal Lines<br>ENV 50140:1993 - 3V/m |
| <b>Supplementary Information</b>   |   |
| The product herewith complies with the requirements of the EMC Directive 89/336/EEC and carries the "CE" mark accordingly.   |   |
| <b>August 01, 1997</b>   | <b>Richard Spangler</b><br><b>Quality Manager</b>   |
| European contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE, Herrenberger Straße 130, D-71034 Böblingen (FAX: +49-7031-143143). |   |



| <b>DECLARATION OF CONFORMITY</b><br>according to ISO/IEC Guide 22 and EN 45014   |   |
|--|---|
| <b>Manufacturer's Name:</b>  | Hewlett-Packard Company   |
| <b>Manufacturer's Address:</b>   | 815 SW 14th Street, Building E<br>Loveland, Colorado 80537  |
| <b>declares that the product</b>   |   |
| <b>Product Name:</b>   | HP Colorado 8GB internal  |
| <b>Model Number:</b>   | C4386A  |
| <b>Product Options:</b>  | All   |
| <b>conforms to the following Product Specifications:</b>   |   |
| <b>Safety:</b>   | EN60950:1992 + A1:1993, + A2:1993, + A3:1995  |
| <b>EMC:</b>  | EN 55022:1994 Class B<br>EN 50082-1:1992<br>IEC 801-2:1991 - 4kV CD, 8kV AD<br>IEC 801-3:1984 - 3V/m<br>IEC 801-4:1988 - 1kV Power Lines, 0.5kV Signal Lines<br>ENV 50140:1993 - 3V/m |
| <b>Supplementary Information:</b>  |   |
| The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC directive 89/336/EEC and carries the "CE" mark accordingly.                   |   |
| <b>August 01, 1997</b>   | <b>Richard Spangler, Quality Manager</b>  |
| European contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HP-TRE, Herrenberger Straße 130, D-71034 Böblingen (FAX: +49-7031-143143). |   |

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# Hewlett-Packard Limited Warranty Statement

HP Colorado Tape Drive  
DURATION OF LIMITED WARRANTY  
Hardware - 2 year  
Software - 90 days

1. HP warrants to you, the end-user customer, that HP hardware, accessories and supplies will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or like-new.
2. HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software media which does not execute its programming instructions due to such defects.
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4. HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.
5. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.
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## Returning Your Drive

**All countries other than the USA:** If your Hewlett-Packard product requires repair or replacement, call Customer Support at the phone number listed on page 55 of this guide to receive instructions.

**In the USA:** If your Hewlett-Packard product requires repair or replacement, follow these instructions:

Call the number listed on page 55. Customer Support will help you determine if your drive is defective. Provide the product type, serial number, and date of purchase. You will be given a return authorization number. Keep the return authorization (RA) number for future reference.

Securely repackage the product (in the original packaging if possible) to prevent shipping damage and mark the return authorization number on the box and in the box along with your name and address.

All product returns must have an accompanying return authorization number. To ensure timely and accurate processing of your return, the number must be clearly printed on the outside of the box.

Use the appropriate address for your location. A traceable shipping method is recommended. The postage, shipping and insurance charges incurred in shipping to Hewlett-Packard will be paid by Purchaser and all risk for the product shall remain with Purchaser until such time as Hewlett-Packard takes receipt of the product.

Once your product is received at Hewlett-Packard, we will ship the replacement product. Hewlett-Packard will pay shipping charges to the Purchaser for replacement product covered under warranty.

If the product is still under warranty, there is no charge for the replacement. If the product is not covered under warranty, an exchange cost will be quoted when the return authorization number is issued.



# Chapter 6: Customer Support Services

## Support for Your Tape Drive and Colorado Backup Software

If you need help with your tape drive, your local reseller has the latest information regarding HP products and services and can provide support under HP's comprehensive menu of reseller services. If your reseller is not able to help, or you are having software problems, you can obtain support from HP directly either through free 24-hours/day interactive electronic services or by telephone (free during warranty).

America Online ..... Keyword: hpstor

CompuServe ..... Go HPSYS

World Wide Web ..... [http://www.hp.com/go/colorado\\_support](http://www.hp.com/go/colorado_support)

Bulletin board site (8,N,1,F, 1200-28.8K baud)

Europe ..... +31 (0)495 546909

Asia/Pacific

Australia ..... (03) 9890 0276

Korea ..... Hitel: (02) 762-0228

Access: Go HPK

Chollian: (02) 220-2001

New Zealand ..... (09) 356 6642

Taiwan ..... (02)9233233

First Name: HP

Last Name: BBS

### QuickFax Faxback Service

Simply dial the fax number from a touch-tone phone or Group 3 fax machine and follow the voice prompts to select the index of available support and product information documents.

USA and Canada ..... 800-368-9673 or 970-635-1510

Europe

Austria (free line) ..... 0660 8128

Belgium (free line)

- Dutch ..... 0800 11906

- French ..... 0800 17043

Denmark (free line) ..... 800 10453

Finland (free line) ..... 9800 13134

France (free line) ..... 05 905900

|  |                                      |
|--|--------------------------------------|
| Germany (free line)  | 0130 810 061                         |
| Italy (free line)  | 1678 59020                           |
| Netherlands (free line)  | 06 022 2420                          |
| Norway (free line)   | 800 11319                            |
| Spain (free line)  | 900 993123                           |
| Sweden (free line)   | 020 795743                           |
| Switzerland (free line)  |                                      |
| - French   | 155 1526                             |
| - German   | 155 1527                             |
| United Kingdom (free line)   | 0800 960271                          |
| Other locations in Europe (toll line)  | +31 (0)20 681 5792                   |
| Asia/Pacific   |                                      |
| Australia  | (03) 9272 2627                       |
| China  | (8610) -65055280                     |
| Japan  | (3) 3335-8622                        |
| Korea  | (02) 769-0543                        |
| New Zealand  | (09) 356 6642                        |
| Singapore  | (65) 291-7951                        |
| Taiwan   | (02)7195589                          |
| E-mail   | Colorado_Support@hp.com              |
| FTP Site   | ftp.hp.com                           |
| <b>Login:</b>  | anonymous                            |
| <b>Password:</b>   | (Your email address)                 |
| <b>Directory:</b>  | /pub/information_storage/hp-colorado |
| Telephone USA and Canada (M-F, 6 am-6 pm Mountain time)  |                                      |
| Literature and dealer referral   | 970-635-1500                         |
| Canada (for French-speaking customers)   |                                      |
| pour assistance en français  | 1-800-387-3867                       |
| During warranty period   |                                      |
| - Technical support  | 970-635-1500                         |
| After warranty period (charges begin only when you connect to a Support Technician, prices are subject to change without notice)   |                                      |
| Technical Support  | 800-810-0130                         |
| (Per incident fee of \$25 US dollars charged to Visa, MasterCard or American Express)  |                                      |
| U.S. only Technical Support  | 900-555-1800                         |
| (\$2.50 per minute/maximum of \$25. You must be 18 years of age or have parental permission to call 900 numbers.)  |                                      |
| Europe (M-F, 8:30-18:00 Central European Time)   |                                      |
| <i>Use these Technical Support numbers during and after your warranty period. No charge for Technical Support during warranty period. Per incident charge after warranty period.</i> |                                      |
| Austria (German)   | 06 60 63 86                          |
| Belgium  |                                      |
| - Dutch  | 02 626 88 06                         |
| - French   | 02 626 88 07                         |
| Denmark  | 39 29 40 99                          |
| Finland  | 02 03 47 288                         |
| France   | 04 50 43 98 53                       |
| Germany  | 0180 52 58 143                       |

|  |   |
|--|---|
| Ireland (English) . . . . .                              | 01 662 55 25                              |
| Italy . . . . .  | 02 2 641 0350                             |
| Netherlands . . . . .                                    | 020 606 8751                              |
| Norway . . . . .   | 22 11 62 99                               |
| Portugal . . . . .                                       | 01 44 17 199                              |
| Spain . . . . .  | 90 23 21 123                              |
| Sweden . . . . .   | 08 61 92 170                              |
| Switzerland (French, Italian, and German) . . . . .      | 08 48 80 11 11                            |
| United Kingdom . . . . .                                 | 0171 512 52 02                            |
| English language support from other countries . . . . .  | +44 171 512 52 02                         |
| Asia/Pacific   |   |
| Australia (M-F 7am-7pm, Eastern Standard Time) . . . . . | (03) 9272 8000                            |
| China (M-F 8:30-17:30) . . . . .                         | (8610)-62625666                           |
| extensions 5602 through 5609, 5611 and 5612              |   |
|  | (8610)-62614174                           |
|  | (8610)-62624175                           |
|  | (8610)-62614176                           |
| Korea (M-F, 8:30-19:00) . . . . .                        | (02) 3270-0700 / 080-999-0700 (toll free) |
| New Zealand (M-F, 9am to 9pm Auckland Time) . . . . .    | (09) 356 6640                             |
| Singapore (M-F, 9:00-17:00) . . . . .                    | (65) 271-7233                             |
| Taiwan (M-F, 8:30-17:30) . . . . .                       | (02) 717-9609                             |
| FAX  |   |
| USA . . . . .  | 970-667-0997                              |
| Asia/Pacific   |   |
| Australia . . . . .                                      | (03) 9272 4099                            |
| Korea . . . . .  | (02) 3270-0707                            |
| New Zealand . . . . .                                    | (+61 3) 9272 4099                         |
| Singapore . . . . .                                      | (65) 278-9225                             |
| Taiwan . . . . .   | (02)5140276                               |



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